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ABSTRACT

This research investigated the prevalence of mystical experiences and how these experiences relate to beliefs about drug addiction, drug use, and spiritual practices. Subjects were 300 undergraduate and graduate students at a large midwestern university who filled out self-report scales on mysticism (Ralph W. Hood, Jr.'s Mysticism Scale) and drug addiction beliefs (Jeffrey A. Schaler's Addiction Beliefs Scale). The scales examined use of tobacco, alcohol, marijuana, cocaine, opium products, and other substances; religious affiliation; spiritual orientation; spiritual practices; and meaningfulness of spiritual practices. Analysis indicated that there were significant differences by university department and by focus on educational or transpersonal courses, but not by gender or year in school. A three-factor solution was produced on the Mysticism Scale, with factors being extrovertive mysticism, introvertive mysticism, and religious interpretation. Factor analysis of the Addiction Beliefs Scale produced factors with low or negligible reliabilities. Results revealed that mystical experiences were not uncommon experiences. Students who engaged in certain spiritual practices and experimented with and/or used certain drugs seemed to have a greater likelihood of a mystical experience. (Contains 25 references.) (JDD)

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Mystical Experiences and Addiction Beliefs of Undergraduate and Graduate Students

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Abstract

The mystical experience is both an intriguing and little understood phenomenon within the repertoire of human experience. Mysticism is often referred to as an intense phenomenological experience of awe/wonder, unity, and expanded sense of self. Mystical experiences are not only nonpathological and normal but also may be more common than is usually believed. Various investigators have found that mystical experiences are psychologically and socially beneficial. This research investigated the prevalence of mystical experiences and how these experiences related to beliefs about drug addiction, drug use, and spiritual practices. Subjects were 300 undergraduate and graduate students at a large mid-western university who filled out self-report scales on mysticism (Hood's *Mysticism Scale*) and drug addiction beliefs (Schaler's *Addiction Beliefs Scale*).

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Mystical Experiences and Addiction Beliefs of Undergraduate and Graduate Students[1]

Theoretical Framework

The mystical experience is both an intriguing and little understood phenomenon within the repertoire of human experience. Mysticism is often referred to as an intense phenomenological experience of awe/wonder, unity, and expanded sense of self (Hood, 1975; Pahnke, 1969; Richards, 1975; Stace, 1960). Mystical experiences are similar to Maslow's (1964) "peak experience" and Csikszentmihalyi's (1990) description during "flow." Hood (1974) explains that intense religious experiences are commonly labeled "mystical," "peak," or "ecstatic."

A mystical experience can be a religious experience, but this is not a defining characteristic (Hood, 1975; Pahnke, 1963). In other words, mystical experiences can occur without a religious interpretation. Stace (1960) researched the mystical literature and categorized the phenomenological characteristics of mystical experiences. A few of these interrelated categories are: Feelings of unity, transcendence of time and space, a deeply felt positive mood, and alleged ineffability. Other researchers have used these categories as a base for assessing mystical phenomena (Hood, 1974; 1975; Pahnke, 1963; Richards, 1975). Ralph W. Hood, Jr., (1975) developed the *Mysticism Scale*, a self-report scale, which is the most commonly used instrument in the field for assessing mystical phenomena (Doblin, 1991; Hood, Morris, & Watson, 1993). Hood conceptualized the items of the *Mysticism Scale* divided into eight categories with four items per category (Hood, Morris, & Watson, 1993). Two items are worded positively and two are worded negatively to prevent a response set (Hood, 1975) (see Table 1).

Although mystical phenomena are usually viewed nonpathologically by most Eastern

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psychologies and counseling theories incorporating Eastern thought, such as Psychosynthesis (Assagioli, 1965), Jungian psychology (Jacobi, 1973), and Grof's Holotropic Breathwork (Grof, 1993), many Western psychologies still consider spiritual or mystical experiences pathological. It is only in the latest addition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) that a category (Religious or Spiritual Problem) has been included that could encompass the spiritual strivings of a human being nonpathologically (APA, 1994). The category is defined as follows:

V62.89 Religious or Spiritual Problem

> This category can be used when the focus of clinical attention is a religious or spiritual problem. Examples include distressing experiences that involve loss or questioning of faith, problems associated with conversion to a new faith, or questioning of spiritual values that may not necessarily be related to an organized church or religious institution. (p. 685)

The spiritual is considered an essential aspect of being human according to Maslow (Roberts, 1978). In 1968, Abraham Maslow, Stanislav Grof, and Anthony Sutich established transpersonal psychology which studies this spiritual dimension among other things. Striving for ego transcendence, going beyond "the skin-encapsulated ego," as Alan Watts phrased it, and reaching a unitive state of consciousness are significant healthy human motivations. Many methods are used to obtain a mystical or spiritual state of consciousness such as breath control, drug use, fasting, holotropic breathwork, prayer, meditation, and yoga.

Mystical experiences are not only nonpathological and normal but also may be more common than is usually believed (Hood, 1975; 1977). Maslow (1964) found in his study of healthy (self-actualizing) individuals that they tended to have more peak experiences than the rest of the population. Hood has also found a relationship between mystical experience and self-actualization (1977) and openness to experience (1975). Lukoff and Lu (1988), reviewing the literature on mystical experiences, report that most investigators find they are psychologically and socially beneficial.

Anticipated Outcomes

It is expected that a relatively large portion of the student population will have a score on the *Mysticism Scale* indicating the likelihood of a mystical experience. Exploring mystical experiences by using Hood's *Mysticism Scale* to operationally define such phenomenological experiences will help to normalize them.

In assessing the occurrence of mystical experiences in the undergraduate and graduate students, we expected that students who have a meaningful spiritual practice will

have a higher mysticism score. Certain spiritual practices are also expected to affect the mysticism score, in particular, current engagement in meditation, prayer, spiritual use of drugs, and reading spiritual writings. Also, students who use psychedelics, for example, marijuana, LSD, mescaline, and peyote, are expected to have a significantly higher mysticism score than those who do not. Neither gender nor year-in-school are expected to influence the mysticism scores.

The factor analysis of the *Mysticism Scale* is expected to produce nearly the same three subscales as indicated in previous research (Hood, Morris, & Watson, 1993; Reinert & Stifler, 1993). The three factor solution for the *Mysticism Scale* has been shown to be rather stable across diverse samples. (A breakdown by item of this three-factor solution is in Table 2.)

There are no hypotheses for the results of the factor analysis of the *Addiction Beliefs Scale* since the scale is new and the original population was addiction counselors which has been deemed to be significantly different from university students. Administering the *Addiction Beliefs Scale* to this college population will break new ground and assist in further defining the useability of the instrument.

Methods

Subjects

Subjects were 300 undergraduate (n = 269, 90%) and graduate (n = 31, 10%) students enrolled in courses offered through several departments in the spring semester, 1994. The majority of the students were enrolled in courses offered through the College of Education (263, 88%) and the remaining students were enrolled in several Art courses (37, 12%).

The number of students and percent of total by year-in-school were as follows: sophomores (55, 18%), juniors (115, 38%), seniors (99, 34%), and graduate (31, 10%). The breakdown by gender of the 300 students was female (240, 80%) and male (60, 20%). The majority of the students (251, 84%) were traditionally aged, under the age of 25.

Instruments

Ralph W. Hood, Jr.'s (1975) 32-item Likert *Mysticism Scale* uses Stace's (1960) categories of mysticism to empirically assess mystical phenomena. The *Mystical Scale* has three subscales: Factor 1, Extrovertive Mysticism, Factor 2, Religious Interpretation; and Factor 3, Introvertive Mysticism (Hood, Morris, & Watson, 1993; Reinert & Stifler, 1993). Table 2 shows the recent three-factor solution that Hood and his colleagues found, the items are listed under each factor from highest to lowest loading.

The second instrument, Jeffrey A. Schaler's (1993) *Addiction Beliefs Scale* has 18 Likert items and was designed to assess an individual's tendency to believe in the free-will model and/or the disease model of addiction. The disease model of addiction suggests addiction is an involuntary behavior and is represented by items such as "People who are drug addicted can never outgrow addiction and are always in danger of relapsing." The free-will model sees addiction as characterized by more voluntary behavior. An example item is: "People can stop relying on drugs or alcohol as they develop new ways to deal with life."

The first 42 items on the *ABS* consist of demographic inquiries and questions regarding specific spiritual practices and frequency of drug use. Both licit and illicit drug use was surveyed particularly because psychedelic drugs, such as marijuana, LSD, mescaline, and psilocybin, can facilitate mystical experiences (Grof, 1992; Hofmann, 1983; Pahnke, 1969; Zinberg, 1984). These drugs are considered psychomagnifiers, amplifying whatever is going on in the mind at the time of use. The drug experience is influenced by three factors: (1) the drug itself, (2) the psychological set of the individual, and (3) the environmental setting. These three facets of a drug experience may enhance or lead to a mystical experience.

Procedures

The *Mysticism Scale* (*M Scale*), the *Addiction Beliefs Scale* (*ABS*), and demographic questions were given to 300 undergraduate and graduate students enrolled at a large midwestern university in the spring semester of 1994. The second author gathered all the data by first introducing herself and the purpose of the study, discussing confidentiality, and obtaining written consent. The students then filled out the two scales.

The students were classified according to five areas for analysis: Department, Focus, Student Status, Gender, and Year-in-School. The Department was related to the university's department through which the course was offered, expect for one instance. The four Departments were defined as follows: 1) Educational Psychology (EPSY), 2) Special Education (EPSE), 3) Art, and 4) Mindview. Mindview, *Psychedelic Mindview*, although it is an Educational Psychology course, was scored separately due to the course contents close interrelationship with this study. A lecture on and discussion of mysticism were part of the course along with a meditation exercise. Readings and discussions dealt with altered states of consciousness.

Students were also divided into two focus areas: Educational or Transpersonal. Students in the Educational Focus were enrolled in classes that were offered through the College of Education. These courses are generally taken by or specifically geared toward

students who are studying to be elementary or secondary teachers. The Transpersonal Focus consisted of students enrolled in classes with a spiritual/transpersonal component to them; the readings and discussions of these classes dealt with alternate states of consciousness, for example, the *Psychedelic Mindview* class. The other transpersonally oriented courses were given through the Art Department.

The remaining areas in which students were classified were Gender (female v. male), Student Status (undergraduate v. graduate), and Year-in-School (sophomore, junior, senior, v. graduate).

Results

MANOVAs

The factor analysis on Hood's *Mysticism Scale* (Hood, Morris, & Watson, 1993) used only undergraduate students; therefore, we limited our factor analysis to only the undergraduates (N = 269) to facilitate a comparison. An initial analysis of the frequencies of the responses per item on both scales suggested that these students were not a homogenous group upon whom a factor analysis should be calculated. MANOVAs were then performed to determine the specific population that should be used to perform the factor analysis. The total score for the *Mysticism Scale* and the total score for the *Addiction Beliefs Scale* were used as the dependent variables in a series of MANOVAs which individually compared the independent variables of Department (EPSY, EPSE, ART, Mindview) ((2 x 4), Focus (educational v. transpersonal) (2 x 2), Gender (female v. male) (2 x 2), and Year-in-School (sophomore, junior, senior) (2 x 3).

The MANOVAS indicated that there were significant differences on the total scale scores by Department and Focus but not by Gender or Year-in-School. It was hypothesized that students in the Mindview class (n = 22) scored significantly higher on the *Mysticism Scale* than the other students due to the close overlap of the course's content with the items of the *Mysticism Scale*. These students were removed from the analyses and the subsequent MANOVAs indicated that the remaining 247 (i.e., 269 - 22 = 247) were homogeneous in their responses, no significant differences were found on any comparisons. The subsequent factor analyses used this subject pool of 247 undergraduates.

Factor Analyses

Mysticism Scale

The factor analysis using orthogonal rotation (SPSS) produced eight factors with an eigenvalue of 1 or more. The first three factors had an eigenvalue of 1.7 or more and

accounted for a total of 40% of the variance. A factor analysis forcing three factors was then performed to look for factors that would match the recent research on the *Mysticism Scale* (see Table 2). This produced three coherent factors with acceptable reliabilities as detailed below. The overall reliability for the *Mysticism Scale* was calculated as .93 using coefficient alpha.

The number of items, percentage of variance accounted for, single item with the highest factor loading, and the reliability of each factor were as follows: Factor 1 (Extrovertive Mysticism), 17 items, 28% of the variance, "I have NEVER had an experience in which all things seemed to be unified into a single whole," alpha = .90; Factor 2 (Introvertive Mysticism), 8 items, 6.4% of the variance, "I have had an experience that is impossible to communicate," alpha = .83; Factor 3 (Religious Interpretation), 7 items, 5.4% of the variance, "I have had an experience which left me with a feeling of awe," alpha = .75. Table 3 contains our three-factor solution and shows factor loadings for each item in descending order.

The three-factor solution above closely resembles Hood, Morris, and Watson's (1993) three-factor solution (see Tables 2 and 3). Our Factor 1 (Extrovertive Mysticism) contains all of Hood's Extrovertive Mysticism factor items in addition to 5 more. Four of these 5 items are the 4 items of the *Noetic Quality* (see Table 1) which refers to intuitive, nonrational experience as a valid source of knowledge. The last extra item that we have in our Factor 1 solution is another item from *Ego Quality*. All 4 items in each of the categories *Inner Subjective Quality* and *Unifying Quality* are contained in Factor 1. The 2 negatively worded items from the two categories *Ego Quality* and *Temporal/Spatial Quality* also are a part of Factor 1.

Hood's Factor 3 (Introvertive Mysticism) is very similar to our Factor 2 (Introvertive Mysticism). Each solution has 8 items and 7 of the 8 items are in agreement (compare Tables 2 and 3). The 7 items in our Factor 3 (Religious Interpretation) are contained in Hood's Factor 2 (Religious Interpretation), although his solution has an additional 4 items. Three of these 4 items are from the *Noetic Quality* category and factored out in our Factor 1 instead, as stated above.

Addiction Beliefs Scale

The factor analysis using orthogonal rotation (SPSS) produced six factors with an eigenvalue of 1 or more. The first three factors had an eigenvalue of 1.5 or more and accounted for a total of 34% of the variance. A factor analysis forcing three factors was then

performed to look for factors that would match the initial research on the *Addiction Beliefs Scale* (see Table 4). This produced three factors with low or negligible reliabilities as detailed below. The overall reliability for the *Addiction Beliefs Scale* was calculated at .587 by coefficient alpha.

The number of items, percentage of variance accounted for, single item with the highest factor loading, and the reliability of each factor were as follows: Factor 1, 7 items, 16% of the variance, "Abstinence is the only way to control alcoholism/drug addiction," alpha = .70; Factor 2, 6 items, 10% of the variance, "Drug addicts and alcoholics can find their own ways out of addiction, without outside help, given the opportunity," alpha = .27; Factor 3, 4 items, 9% of the variance, Drug addiction is a way of life people rely on to cope with the world," alpha = .23. Table 4 contains our three-factor solution and shows factor loadings for each item in descending order.

The overall reliability of the scale is very low (alpha = .587) and, consequently, so are the reliabilities of the three factor solution (Factor 1, alpha = .70; Factor 2, alpha = .27; Factor 3, alpha = .23). It seems difficult to define the Factors in our three-factor solution, this is due, in part, to the low reliability. There doesn't seem to be a noticeable underlying theme to any of them except, perhaps, the first one (see Table 4). Further analyses on the *Addiction Beliefs Scale* are not reported due to the lack of internal consistency.

ANOVAs

A total score for the *Mysticism Scale* (*MS total*) was computed for each undergraduate and graduate student (N = 300) who completed the survey. The total score was used as the dependent variable in a series of ANOVAs which individually compared the independent variables of Focus (educational v. transpersonal), Student Status (undergraduate & graduate), Age (15-19 yrs, 20-24 yrs, 25-29 yrs, 30-34 yrs, v. 35+yrs), and Gender (female v. male). Where more than two levels existed within an independent variable, a Tukey-B follow-up test of differences was performed to locate exactly where the differences were. The higher the mysticism score the more likely that mystical phenomena were experienced (Hood, 1975).

A series of ANOVAs was also performed on the independent variables of drug category (alcohol, tobacco, psychedelics, cocaine, opium derivatives) by frequency of use (Never Used, Used/Use, & Frequent Use). Two 3 x 1 ANOVAs for each drug were calculated using the total scale score as the dependent variable. The Never Used anchor on the Likert scale was coded 1 and is self explanatory. The Used/Use group combined three

frequency choices: those that identified that they (2) No Longer Used the substance in question, those who (3) Use Once/Twice A Year, or those who (4) Use Once/Twice A Month. The Frequent Use group combined the remaining two possible frequency choices: (5) Use Once/Twice A Week or (6) Use Once/Twice A Day. Spiritual meaningfulness and engagement in specific spiritual activities were also compared on the *MS total*, these will be discussed later.

Descriptive Categories

The *MS total* scores were significantly different by Focus $F(1, 300) = 6.26$, $p < .01$. The Educational Focus (250, M = 102) had a significantly lower mysticism score than the Transpersonal Focus (50, M = 113). No significant differences were found on the mysticism scores by Gender, Student Status (undergraduate v. graduate), or Age (15-19 yrs, 20-24 yrs, 25-29 yrs, 30-34 yrs, v. 35+ yrs).

Drug Related Items

The alcohol items (beer, wine, & mixed drinks/liquor) on the survey were combined into the Alcohol category. The tobacco items (cigarettes/cigars & chewing tobacco/snuff) were likewise combined into the Tobacco category since users in these categories tended to overlap. The psychedelic items were also combined (marijuana/hashish, LSD, psilocybin, & mescaline) but the combined results were the same as the marijuana/hashish category (MJ); therefore, it would seem that the other psychedelics were used in addition to marijuana/hashish but not more frequently. No one indicated ever using crack cocaine so the category of cocaine (Cocaine) does not represent any crack cocaine use. Opium (Used/Use n = 19), morphine (Used/Use n = 3), and heroin (Used/Use n = 3) were combined into the category Opium Products because the numbers were so small. Ecstasy (MDMA) was left in a category by itself and was not included with the psychedelics because it is not considered a non-specific psychomagnifiers like the others, i.e., marijuana, LSD, mescaline, psilocybin, but rather has been described as a sympathomimetic drug (Greer & Tolbert) and empathogenic substance (Adamson, 1985).

Alcohol. The mysticism scores were significantly different by frequency of Alcohol use $F(2, 300) = 4.04$, $p < .05$. The Tukey-B showed that those who Never Used Alcohol (11, M = 83) had a significantly lower mysticism score than both those who Used/Use (159, M = 103) and those who used Frequently (130, M = 107).

Marijuana (MJ). The *M Scale* scores were also significantly different by frequency of MJ use $F(2, 300) = 10.78$, $p < .001$. The findings for MJ were slightly different than for

Alcohol, those who used MJ Frequently (26, M = 125) had a higher mysticism score than both the other two categories (Never Used 170, M = 100; Used/Use 103, M = 106).

Tobacco. There were no differences on the mysticism scores by Tobacco use.

Cocaine, Opium Products, & MDMA. The Cocaine, Opium Products, and MDMA categories only had two groups, Never Used and Used/Use, there were no Frequent Users. The two levels of users in the drug categories Cocaine and Opium Products were significantly different on the mysticism scores $F(1, 300) = 9.20$, $p < .01$. For each, the Never Used group (Cocaine 271, M = 102; Opium Products 281, M = 103) was lower on the mysticism scores than the Used/Use group (Cocaine 29, M = 119; Opium Products 19, M = 126). The number in the Used/Use group for MDMA was too small (8, M = 129) to run any analyses.

Spiritually Related Items

The spiritually related items were included right after the demographics in the survey. The subjects were asked several questions regarding how they felt about their spiritual practices (Religious Affiliation, Spiritual Orientation, and Meaningfulness of Spiritual Practice) and whether they currently engaged in specific spiritual practices (Prayer, Meditation, Yoga/Aikido, Special Postures, Breath Control, Fasting, Attend Services, Spiritual Use of Drugs, Read Spiritual Writings). An ANOVA was performed on each of these items, except Religious Affiliation, using the *M Scale* score as the dependent variable.

Religious Affiliation. The mysticism scores were not significantly different by Religious Affiliation. The average mysticism score by affiliation were similar, although the category No Affiliation had the highest average score: Catholic (132, M = 101), Protestant (55, M = 101), Jewish (13, M = 106), Other (60, M = 106), Agnostic/Atheist (13, M = 109), and No Affiliation (27, M = 115).

Spiritual Orientation. The mysticism scores were significantly different by degree of spiritual orientation on a five point Likert scale which ranged from 1 = Conservative to 5 = Liberal. The *M Scale* score increased from Conservative (19, M = 88) to Mainstream (103, M = 102) to Liberal (48, M = 114) and the ANOVA was significant $F(4, 298) = 3.81$, $p < .01$. The Tukey-B showed that the Conservative group (19, M = 88) had a significantly lower mysticism score than both the fourth group, located between Mainstream & Liberal (78, M = 107) and the Liberal group (48, M = 114).

Meaningfulness of Spiritual Practice. The mysticism scores were significantly different by reported depth of meaning derived from the student's spiritual practice. Meaningfulness was rated on a four point Likert scale ranging from 1-Unmeaningful to 4-

Usually Very Meaningful. The *M Scale* score increased as more meaning was reported (Unmeaningful 19, M = 94; Slightly Meaningful 73, M = 96; Sometimes Very Meaningful 125, M = 105; Usually Very Meaningful 83, M = 111). The ANOVA was significant $F(3, 300) = 4.90$, $p < .01$ and the Tukey-B showed that those who found their spiritual practice to be Slightly Meaningful were significantly different from both those who reported that their practice was Sometimes Very Meaningful and Usually Very Meaningful. Even though the mean score for the Unmeaningful group (M = 94) was lower than the Slightly Meaningful group, the Tukey-B did not indicate a significant difference with the Unmeaningful group and the others, perhaps this is due to the small number in this group (n = 19).

Spiritual practices. The following items asked the students to respond either Yes or No as to whether they currently engaged in certain spiritual practices. A one-way ANOVA (2 x 1) was performed on the *Mysticism Scale's* total score comparing those who did report that they engaged in the particular practice and those who did not. Four spiritual practice items were not significant, Attend Services, Attend Study Groups, Fasting, and Prayer, while those who reported that they engaged in Yoga/Aikido were too small to analyze (n = 4).

Those who meditate (Meditation) had a higher mysticism score (71, M = 116) than those who did not (228, M = 100), $F(1, 299) = 17.61$, $p < .001$. Likewise, those who engaged in reading spiritual material (Read Spiritual Writings) (110, M = 112) scored significantly higher than those who did not (190, M = 100), $F(1, 299) = 13.83$, $p < .001$. Special Postures and Breath Control were two other practices which led to significantly higher mysticism scores. Students (n = 18) who practiced Special Postures had a mean score of 127 while those who didn't (n = 28) was 103, $F(1, 298) = 13.39$, $p < .001$. Those who engaged in Breath Control (n = 70) had a mean score of 115 and those who did not (n = 230) had a mean score of 101, $F(1, 299) = 15.12$, $p < .0001$. Students who use drugs for spiritual purposes had a significantly higher mysticism score (12, M = 140) than those who did not (288, M = 103), $F(1, 299) = 22.25$, $p < .0001$.

Educational Importance of the Study

The *Mysticism Scale* appears to have value in identifying the experience of mystical phenomena in undergraduate and graduate students. The mysticism scores (N = 300) covered the entire range, from the lowest, 32 (frequency = 1), to the highest possible score of 160 (frequency = 1). The mean was 104, the mode was 119, the standard deviation was 28. One SD above the mean yields a score of 132 and 17% of the students (n = 52) had a score of 132 or more. Two SDs above the mean yields a score of 160 and .07% of the students (n = 1)

had a score of 160. The large percentage (17%) of students at or above one SD would seem to indicate that mystical experiences, as assessed by the *Mysticism Scale*, are not uncommon experiences.

Students who engage in certain spiritual practices and experiment with and/or use certain drugs seem to have a greater likelihood of a mystical experience. The identification of a small number of students that use drugs for spiritual purposes suggests that altering the "normal" state of consciousness chemically is a method of striving for ego transcendence or reaching a unitve state of consciousness. Understanding the relationship between beliefs about addiction and drug use and the spiritual dimension of a human being can lead toward more holistic educational and counseling practices (Pahnke, 1969). Therefore, since both Maslow (1964) and Hood (1975) have found that individuals who have intense experiences such as peak or mystical experiences tend to be healthier, experience of mystical phenomena as measured by Hood's *Mysticism Scale* could point to healthier undergraduate and graduate students at this large midwestern university. Further investigation into the similarities of the phenomenological experience of "mystical states of consciousness" with Csikszentmihalyi's description during "flow," Maslow's "peak experience" and selected transpersonal experiences will contribute to normalizing this alternate state of consciousness, and recognizing its personal and social benefits (Lukoff & Lu, 1988; Zinberg, 1977).

Future Research Directions

To date, only a preliminary examination of the results has been completed, further exploration and analysis is needed. Many questions which were asked have not been analyzed and could prove to be informative. More data needs to be gathered from students who could be classified as having a Transpersonal Focus, we are expecting to do this in the coming academic year, 1994-1995. Sampling other populations would also allow for greater generalizability.

Many of the spiritual practice categories used in this research came from Pahnke's research (1963) and some of these categories need to be further defined since they may represent a wide range of behaviors. Since the subjects could only respond to the spiritual practice items with the dichotomous option of "yes" or "no," all of the categories seem to be unclear as to actual practical dimensions, such as length of time practiced and frequency of practice. A more encompassing Likert scale, similar to the one used for the drug categories, may be more appropriate and may obtain more specific behavioral information.

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TABLE 1

Mysticism Scale, Research Form D

Items are listed under each criterion from which they were operationalized and numbered according to the factor upon which they loaded the highest. (Hood, 1975, pp. 31-32)

EGO QUALITY: Refers to the experience of a loss of sense of self while consciousness is nevertheless maintained. The loss of self is commonly experienced as an absorption into something greater than the mere empirical ego.

3. I have had an experience in which something greater than myself seemed to absorb me. (Factor 3)
4. I have had an experience in which everything seemed to disappear from my mind until I was conscious only of a void. (Factor 3)
6. I have NEVER had an experience in which I felt myself to be absorbed as one with all things. (Factor 1)
24. I have NEVER had an experience in which my own self seemed to merge into something greater. (Factor 1)

UNIFYING QUALITY: Refers to the experience of the multiplicity of objects of perception as nevertheless united. Everything is in fact perceived as "One."

12. I have had an experience in which I realized the oneness of myself with all things. (Factor 1)
19. I have had an experience in which I felt everything in the world to be part of the same whole. (Factor 1)
28. I have NEVER had an experience in which I became aware of a unity to all things. (Factor 1)
30. I have NEVER had an experience in which all things seemed to be unified into a single whole. (Factor 1)

INNER SUBJECTIVE QUALITY: Refers to the perception of an inner subjectivity to all things, even those usually experienced in purely material forms.

8. I have NEVER had an experience in which I felt as if all things were alive. (Factor 1)
10. I have NEVER had an experience in which all things seemed to be aware. (Factor 1)
29. I have had an experience in which all things seemed to be conscious. (Factor 1)
31. I have had an experience in which I felt nothing is ever really dead. (Factor 1)

TEMPORAL/SPATIAL QUALITY: Refers to the temporal and spatial parameters of the experience. Essentially both time and space are modified with the extreme being one of an experience that is both "timeless" and "spaceless."

1. I have had an experience which was both timeless and spaceless. (Factor 3)
11. I have had an experience in which I had no sense of time or space. (Factor 3)
15. I have NEVER had an experience in which time and space were non-existent. (Factor 1)
27. I have NEVER had an experience in which time, place, and distance were meaningless. (Factor 1)

NOETIC QUALITY: Refers to the experience as a source of valid knowledge. Emphasis is on a nonrational, intuitive, insightful experience that is nevertheless recognized as not merely subjective.

13. I have had an experience in which a new view of reality was revealed to me. (Factor 2)
16. I have NEVER experienced anything that I could call ultimate reality. (Factor 2)
17. I have had an experience in which ultimate reality was revealed to me. (Factor 2)
26. I have NEVER had an experience in which deeper aspects of reality were revealed to me. (Factor 2)

INEFFABILITY: Refers to the impossibility of expressing the experience in conventional language. The experience simply cannot be put into words due to the nature of the experience itself and not to the linguistic capacity of the subject.

2. I have NEVER had an experience which was incapable of being expressed in words. (Factor 3)
21. I have NEVER had an experience which I was unable to express adequately through language. (Factor 3)
23. I have had an experience that is impossible to communicate. (Factor 3)
32. I have had an experience that cannot be expressed in words. (Factor 3)

POSITIVE AFFECT: Refers to the positive affective quality of the experience. Typically the experience is of joy or blissful happiness.

5. I have experienced profound joy. (Factor 2)
7. I have NEVER experienced a perfectly peaceful state. (Factor 2)
18. I have had an experience in which I felt that all was perfection at that time. (Factor 2)
25. I have NEVER had an experience which left me with a feeling of wonder. (Factor 2)

RELIGIOUS QUALITY: Refers to the intrinsic sacredness of the experience. This includes feelings of mystery, awe, and reverence that may nevertheless be expressed independently of traditional religious language.

9. I have NEVER had an experience which seemed holy to me. (Factor 2)
14. I have NEVER experienced anything to be divine. (Factor 2)
20. I have had an experience which I knew to be sacred. (Factor 2)
22. I have had an experience which left me with a feeling of awe. (Factor 2)

TABLE 2

Three-Factor Structure of the *Mysticism Scale*
Item Number and Item in order of Loading Weight (Hood, Morris, & Watson, 1993, p. 1177)

Factor 1: Extrovertive Mysticism (12 items; alpha = .76)

6. I have NEVER had an experience in which I felt myself to be absorbed as one with all things.
8. I have NEVER had an experience in which I felt as if all things were alive.
10. I have NEVER had an experience in which all things seemed to be aware.
12. I have had an experience in which I realized the oneness of myself with all things.
15. I have NEVER had an experience in which time and space were non-existent.
19. I have had an experience in which I felt everything in the world to be part of the same whole.
24. I have NEVER had an experience in which my own self seemed to merge into something greater.
27. I have NEVER had an experience in which time, place, and distance were meaningless.
28. I have NEVER had an experience in which I became aware of a unity to all things.
29. I have had an experience in which all things seemed to be conscious.
30. I have NEVER had an experience in which all things seemed to be unified into a single whole.
31. I have had an experience in which I felt nothing is ever really dead.

Factor 2: Religious Interpretation (12 items; alpha = .76)

5. I have experienced profound joy.
7. I have NEVER experienced a perfectly peaceful state.
9. I have NEVER had an experience which seemed holy to me.
13. I have had an experience in which a new view of reality was revealed to me.
14. I have NEVER experienced anything to be divine.
16. I have NEVER experienced anything that I could call ultimate reality.
17. I have had an experience in which ultimate reality was revealed to me.
18. I have had an experience in which I felt that all was perfection at that time.
20. I have had an experience which I knew to be sacred.
22. I have had an experience which left me with a feeling of awe.
25. I have NEVER had an experience which left me with a feeling of wonder.
26. I have NEVER had an experience in which deeper aspects of reality were revealed to me.

Factor 3: Introvertive Mysticism (8 items; alpha = .69)

1. I have had an experience which was both timeless and spaceless.
2. I have NEVER had an experience which was incapable of being expressed in words.
3. I have had an experience in which something greater than myself seemed to absorb me.
4. I have had an experience in which everything seemed to disappear from my mind until I was conscious only of a void.
11. I have had an experience in which I had no sense of time or space.
21. I have NEVER had an experience which I was unable to express adequately through language.
23. I have had an experience that is impossible to communicate.
32. I have had an experience that cannot be expressed in words.

TABLE 3

Roberts & Hruby's Three-Factor Structure of Hood's *Mysticism Scale*
Factor Loading, Item Number, and Item

		Factor 1: Extrovertive Mysticism (17 items; alpha = .901)
.740	30.	I have NEVER had an experience in which all things seemed to be unified into a single whole..
.717	28.	I have NEVER had an experience in which I became aware of a unity to all things.
.595	12.	I have had an experience in which I realized the oneness of myself with all things.
.591	26.	I have NEVER had an experience in which deeper aspects of reality were revealed to me.
.568	27.	I have NEVER had an experience in which time, place, and distance were meaningless.
.550	19.	I have had an experience in which I felt everything in the world to be part of the same whole.
.549	29.	I have had an experience in which all things seemed to be conscious.
.502	24.	I have NEVER had an experience in which my own self seemed to merge into something greater.
.497	15.	I have NEVER had an experience in which time and space were non-existent.
.478	13.	I have had an experience in which a new view of reality was revealed to me.
.470	10.	I have NEVER had an experience in which all things seemed to be aware.
.464	17.	I have had an experience in which ultimate reality was revealed to me.
.453	8.	I have NEVER had an experience in which I felt as if all things were alive.
.440	16.	I have NEVER experienced anything that I could call ultimate reality.
.433	3.	I have had an experience in which something greater than myself seemed to absorb me.
.425	6.	I have NEVER had an experience in which I felt myself to be absorbed as one with all things.
.367	31.	I have had an experience in which I felt nothing is ever really dead.
		Factor 2: Introvertive Mysticism (8 items; alpha = .826)
.712	23.	I have had an experience that is impossible to communicate.
.698	32.	I have had an experience that cannot be expressed in words.
.602	11.	I have had an experience in which I had no sense of time or space.
.597	21.	I have NEVER had an experience which I was unable to express adequately through language.
.582	2.	I have NEVER had an experience which was incapable of being expressed in words.
.526	4.	I have had an experience in which everything seemed to disappear from my mind until I was conscious only of a void.
.521	1.	I have had an experience which was both timeless and spaceless.
.374	18.	I have had an experience in which I felt that all was perfection at that time.
		Factor 3: Religious Interpretation (7 items; alpha = .746)
.661	22.	I have had an experience which left me with a feeling of awe.
.578	7.	I have NEVER experienced a perfectly peaceful state.
.561	14.	I have NEVER experienced anything to be divine.
.555	25.	I have NEVER had an experience which left me with a feeling of wonder.
.547	20.	I have had an experience which I knew to be sacred.
.535	9.	I have NEVER had an experience which seemed holy to me.
.498	5.	I have experienced profound joy.

TABLE 4

Roberts & Hruby's Three-Factor Structure of Schaler's *Addiction Belief Scale*

Factor 1: (7 items; alpha = .696)

.643	10.	Abstinence is the only way to control alcoholism/drug addiction. [Disease model]
.616	5.	Addiction is an all-or-nothing disease: A person cannot be a temporary drug addict with a mild drinking or drug problem. [Disease model]
.599	9.	The most important step in overcoming an addiction is to acknowledge that you are powerless and can't control it. [Disease model]
.551	12.	Alcoholics and drug addicts can learn to moderate their drinking or cut down on their drug use. [Free-will model]
.511	17.	People who are drug addicted can never outgrow addiction and are always in danger of relapsing. [Disease model]
.447	3.	The only solution to drug addiction and/or alcoholism is treatment. [Disease model]
.436	2.	Addicts cannot control themselves when they drink or take drugs. [Disease model]

Factor 2: (6 items; alpha = .265)

.599	16.	Drug addicts and alcoholics can find their own ways out of addiction, without outside help, given the opportunity. [Free-will model]
.594	4.	The best way to overcome addiction is by relying on your own willpower. [Free-will model]
.527	15.	You have to rely on yourself to overcome an addiction such as alcoholism. [Free-will model]
.496	11.	Physiology, not psychology, determines whether one drinker will become addicted to alcohol and another will not. [Disease model]
.491	14.	The fact that alcoholism runs in families means that it is a genetic disease. [Disease model]
.479	8.	People often outgrow drug and alcohol addiction. [Free-will model]

Factor 3: (4 items; alpha = .226)

.649	18.	Drug addiction is a way of life people rely on to cope with the world. [Free-will model]
.616	13.	People become addicted to drugs/alcohol when life is going badly for them. [Free-will model]
.458	6.	People can stop relying on drugs or alcohol as they develop new ways to deal with life. [Free-will model]
.410	1.	Most addicts don't know they have a problem and must be force to recognize they are addicts. [Disease model]

Unused:

	7.	Addiction has more to do with the environments people live in, than the drugs they are addicted to. [Free-will model]